

What is claimed is:

1 1. A color selection apparatus for a cathode ray tube, the color selection apparatus
2 comprising:
3 a mask bearing short and long axis, the mask being provided with a plurality of beam-guide
4 holes; and
5 a frame combined with the mask such that the mask is kept in a tensioned state,
6 wherein the mask is tensioned in the long axis direction while being supported by the frame.

1 2. The color selection apparatus of claim 1, wherein the frame comprising a pair of
2 supporting members fitted to the mask while being arranged parallel to each other, and a pair of
3 elastic members fitted to the supporting members while being disposed between the supporting
4 members in parallel to keep the tensioned state of the mask in a constant manner.

1 3. The color selection apparatus of claim 2, wherein the side of the supporting member
2 contacting the mask is curved by a predetermined curvature.

1 4. The color selection apparatus of claim 1, wherein the mask comprises a plurality of
2 strips spaced apart from each other with a predetermined distance, and real bridges disposed between
3 the neighboring strips while being spaced apart from each other with a predetermined distance, the
4 beam-guide holes being formed with a plurality of slots longitudinally proceeding in the long axis

direction while being partitioned by the real bridges.

5. The color selection apparatus of claim 1, wherein the mask comprises a plurality of strips spaced apart from each other with a predetermined distance, the beam-guide holes being formed with single slots longitudinally proceeding in the long axis direction while being disposed between the neighboring strips.

6.

A cathode ray tube, comprising:

a panel with a substantially flat outer surface and an inner curved surface, the inner curved surface of the panel including a phosphor screen;

a funnel connected to the panel while externally mounting a deflection unit for deflecting electron beams;

a neck connected to the funnel while internally mounting an electron gun for emitting the electron beams; and

a color selection apparatus internally fitted to the panel such that the electron beams land on correct phosphors of the phosphor screen,

wherein the panel includes an effective screen with short and long axis while bearing a first thickness T_h at the ends of the effective screen in the long axis direction and a second thickness T_v at the ends of the effective screen in the short axis direction, the second thickness T_v of the panel being established to be larger than the first thickness T_h of the panel,

wherein the color selection apparatus includes a mask with short and long axis while bearing a plurality of beam-guide holes, and a frame combined with the mask such that the mask maintains a tensioned state, the mask being tensioned in the long axis direction while being supported by the frame.

7. The cathode ray tube of claim 6, wherein the panel includes a third thickness T_c at the center of the effective screen while satisfying the following condition: $V/H \geq 1.1$ where $V(\%)$ is $(T_v/T_c) \times 100$, and $H(\%)$ is $(T_h/T_c) \times 100$.

8. The cathode ray tube of claim 6, wherein the effective screen includes an aspect ratio of 4:3.

9. The cathode ray tube of claim 6, wherein the panel has a diagonal axis, and the length L of the panel in the diagonal axis direction is established to be 23 inch or less.

(10) A cathode ray tube, comprising:

a panel with a substantially flat outer surface and an inner curved surface, the inner curved surface of the panel including a phosphor screen;

a funnel connected to the panel while externally mounting a deflection unit for deflecting electron beams;

6 a neck connected to the funnel while internally mounting an electron gun for emitting the
7 electron beams; and

8 a color selection apparatus internally fitted to the panel such that the electron beams land on
9 correct phosphors of the phosphor screen,

10 wherein the phosphor screen is shaped with short and long axis, and the phosphors are
11 longitudinally arranged at the phosphor screen in the long axis direction,

12 wherein the color selection apparatus includes a mask with a plurality of beam-guide holes
13 corresponding to the phosphors, and a frame combined with the mask accommodating the mask
14 being tensioned in the long axis direction,

15 wherein the electron beams emitted from the electron gun are directed toward the phosphor
16 screen in line while being parallel to the short axis of the phosphor screen.

1 11. The cathode ray tube of claim 10, further comprised of the panel including an effective
2 screen with short and long axis, a first thickness at the ends of the effective screen in the long axis
3 direction being less than a second thickness at the ends of the effective screen in the short axis
4 direction.

1 12. The cathode ray tube of claim 11, further comprised of a ratio of the second thickness
2 to the first thickness being greater than or equal to 1.1.

1 13. The cathode ray tube of claim 12, further comprised of a tensional strength of the
2 periphery of the mask being greater than at the center of the mask.